The Scientific American Supplement. Index for Vol. 43.

JANUARY—JUNE, 1897.

The * Indicates that the Article is Illustrated with Engravings.

A

Abyssinia, emperor of....*17598
Academie des Sciences....17094
Accumulators for cars....17857
Acetylene, kindling point....17806
Acetylene lamp, new....*17795
Acetylene lighting apparatus....*17652
Acetylene, new uses for....17632
Acid, nitrous, test for....17856
Acid, tantaric, manufacture....17607
Adders and vipers....*17607
Air, change of, science of....17696
Air, compressed, on railways....17593
Air, compressed, reservoir....*17632
Air, compressed, for traction....17592
*17616
Air, electrif. by X rays....*17635
Air, fluid, indust. use....17878
Air and steam, properties of....17592
Alabama and Pr. George, ships..*17802
Alaska, unexplored....17548
Alcohol from beet molasses....17589
Alcohol traffic, Swiss....17080
Alcohol in various liquors....17749
Alloys for coinage....17536
Alloys, iron and nickel....17581
Alloys, secret, Japanese....17584
Alternator, high frequency....*17813
Aluminum alloys....17916
Alum in bread....17532
Aluminum in 1896....17670
Aluminum bronze....17665
Aluminum, bronzing....17804
Aluminum cooking app....17901
Aluminum as conductor....17521
Aluminum, engraving an....17825
Aluminum, future price....17837
Aluminum and mercury....17889
Aluminum plates, cohesion of....17830
Aluminum, plating of....17836
Aluminum product, 1896-97....17805
Aluminum in roofing....17805
Aluminum yacht blocks....17709
Amber, ancient and modern....17632
Amber production of 1896....17553
Ammonia for cleaning....17708
Ammonia and nitride process....17665
Ammonia, toilet....17850
Amsterdam Ave., extension....*17504
Analysis, chemical, results....17692
Animals as machines....17675
Antipyrine....17564
Antiseptic powder....17564
Ants as property holders....17637
Ape, Andaman....*17643
Apples, American, how sold....17541
Aquaria, salt water for....17532
Architecture, Elizabethan....17837
Ardeche, gorges of....*17530
Armature ventilation....17621
Army of the Pope....17768
Army signaling....17864
Arniotis, Miss....*17582
Asphalt, traffic on....17561
Aspirators and separators....*17855
Astronomy, progress in 1896....17580
Astrophotography, methods....*17895
Atmosphere, pressure of....17749
Aurora borealis, the....*17754
Ax handles, polish for....17788

B

Baby powder....17596
Bacteria, and animal life....17610
Bacteria in water and food....17568
Baking powder....17564
Bass relief, Begas'....*17591
Bath soap paste....17644
Bath, toning and fixing....17788
Battery, storage, Blot....17692
Battery, storage, a large....17553
Battery, storage, Tommasi....17745
Batteries, primary, behavior....17889
Battle of Velestino....*17880
Battles, modern, casualties in....17649
Battleship Prince George....*17560
Battleships, stability of....*17802
Bazar, charity, burning of....*17850
Bear family, a....*17858
Bear of Northern India....*17835
Beard, significance of....17857
Bearings, vulcanite graphite....17775
Beaver, the....*17714
Bedbug soap solution....17888
Bedbug exterminator....17888
Bee, brain of, optic lobe....17713
Bee sting remedy....17644
Bees, drunken....17888
Bees in medicine....17878
Beer, ginger, fermented....17868
Beer and the kidneys....17798
Beer mugs, German....17633
Begas, Prof., atelier of....*17591
Bell casting....17836
Belting paper....17692
Benares, the ancient....17804
Benzole and benzine....17824
Berovitch Pasha....*17719
Beverages of Mexico....17519
Bicycle accessories, new....*17667
Bicycle, chainless....*17710
Bicycle, folding, Faun....*17620
Bicycle lamp oil....17532
Bicycle pedal, curves of....*17628
Bicycle race by women....*17666
Bicycle tire cement....17622, 17706, 17788
17836
Bicycle tires, repair of....*17619
Bicycles, change of gear for....*17809
Bicycles, Germany....17688
Bicycling, Austrian army....*17911
Bicycling in Germany....17830
Birds in relation to man....17835
Birth rate, decrease of....17733
Bismuth extraction....17633
Blackboard lacquers....17506
Blacking, liquid....17664
Blood from inorganic iron....17541
Blood pressure and work....17910
Blood stains, removal....17900
Blowpipes of the Dyaks....17897
Boat lowering apparatus....*17618
Boat, military, new....*17519
Boats, row, novelty in....17733
Bog slide, Knocknaguha....*17608
Bogs, peat, and mosses....17746, 17758
Boiler covering tests....17665
Boiler plate, the largest....17504
Boiler room labor, cost....17869
Boiler scale, cure of....17704
Boiler scale, prevention....17900
Book trade in Germany....17765
Boomerang, the....17897
Booster, the....17889
Borax for brazing....17552
Bore hole, the deepest....17889
Boron bronze....17691
Boston subway, the....17733
Botany, new manual of....17604
Brain of man and animals....*17611
Brake blocks, note on....17743
Brakeshoe composition, new....17536
Brass, blackening....17824
Brass coloring....17564
Breath shortness on mountains....17764
Breech piece, ring, Canet's....*17517
Brick, fire, colorations....17918
Brick making plant....*17669
Bricks, porous....17692
Bridge, beton, over Danube....17837
Bridge, the longest....17759
Bridge, roller, new....17789
Bridge strain, measurement....17688
Briquettes, culm heap....17694
Bronze articles, cleaning....17788
Bronze, boron....17691
Buildings, old, deception in....17776
Bullets, flying, photographing....17794
Buoy, life, Archibald's....*17793
Butter, export, from the U. S....17889

C

Cable, Atlantic, laying of a....17745
Cable, Brest and New York....17745
Cables, submarine....17645
Cables, submarine, in war....17798
Calcium carbide in England....17745
Calculator, a lightning....*17787
Camphor tree....*17523
Canal, Chicago, water power....17593
Canal, irrigation, California....*17543
Canal, transjapanese....17817
Candles, glycerine....17686
Canea, port of....*17723, *17779
Caoutchouc, artificial....17776
Capital of United States....17092
Car covering, copper....17685
Car, dustproof....17553
Car, fire, railway....17889
Car inspection, railway....*17881
Car lighting, electric....17585
Car, a metallurgical....17745
Car, motor, in excelsis....17739
Car, private, Lincoln's....17759
Cars, accumulators for....17857
Cars, automobile, Serpollet....*17867
Cars, bullet proof....17765
Cars, electric, effect on rails....17777
Cars, old, new use for....17633
Cars, postal....17679
Cars, Pullman, revenue....17585
Carbon rods, making....17745
Cards, visiting, iron....17632
Carriage, motor, Pretot....*17710
Carriages, gasoline and electric....*17739
Carriages, horseless, new....*17588
Carriages, horseless, race of....*17518
Carpet lining, wood pulp....17565
Casa Grande ruin....*17677
Castings, clean, making....17694
Castle, Moorish, Cintra....*17883
Castle, Runkelstein, festival....*17918
Catacombs of Paris....*17723
Cats and dogs, trained....*17663
Celery compound, tonic....17836
Cement, bicycle tire....17622, 17706, 17788
17836
Cement, glue....17693
Cement, jewelers'....17664
Cement for leather....17552
Cement, liquid....17644
Cement to fix rubber....17644
Cement, shellac....17693
Cement, spirit....17693
Cements, glass....17824
Cements, resist. to sea water....17901
Chair, arm, for the lame....*17737
Champagne....17540
Channel, Eads....17632
Characters, vestigial, in man....17609
Checks, bank, forging....17565
Chemical, fluorescent, new....17569
Chemistry of cyanide process....17664
Chemistry, progress of....17787
Chronophotography, app. for....*17727
Chronograph, photo., polarizing..*17512
Churches, monolithic....*17531
Circus performance, a....*17531
Chimney, steel, a high....17597
Clepsydras....*17630
Clock, bicycle....*17817
Clock of Place Gambetta....*17759
Club, Fat Men's, Paris....*17833
Coal analysis by X rays....17709
Coal dust ignited by sun....17733
Coal handling, boiler plant....*17697
Coal, high and low grade....17692
Coal mining in Japan....17777
Coal trade, American, 1896....17697
Coals, gas, testing....17677
Cocainist, confessions of....17695
Cock for compressed gas....*17632
Cockroach powder....17888
Cocoanut culture in Samoa....17824
Cocoon crop of 1896....17533
Coffee drinking, Moorish....17708
Coffee growing in India....17896
Coke industry....*17703
Coinage alloys....17536
Coinage of France....*17887
Coins, disappearance of....17597
Coins, to restore....17766
Coldrenick disaster....*17706
Colloid reliefs....17855
Cologne, German....17644
Columbia University, latitude....17819
Columns, fireproof tests....*17534
Comet, Perrine's....*17724
Compressors, air....*17592
Concert of Europe, the....*17847
Concrete, a good....17856
Concretions, iron....*17637
Condensing, surface, plant....*17710
Conveyor, coal....*17687
Copper, electrolytic....17633
Copper, electrolytic deposit....17665
Copper from green water....17509
Coral reefs, recent boring in....17810
Cord, electric, fire danger....17553, 17789
Cores, temperature to bake....17645
Coupe, electric, Darracq....*17739
Crane, hydraulic, first....17621
Crane, locomotive....*17566
Crane, traveling, steam....*17806
Crape, to restore....17532
Crete, insurrection in....*17719, *17800
Cruisers, German, new....*17742
Crushing machinery....*17774
Cuba, productive forces of....17829
Currency systems....17638
Cyclamens....*17642
Cycle exhibition, France....*17667
Cyclodrome, the....*17794

D

Dahomey, east frontier of....*17836
Dahrnenite, explosive....175.3
Dam, new, Minneapolis....17565
Davit, Abbott's....*17618
Denmark, railways of....17532
Dental instrum., sterilizing....17668
Dentifrice, liquid....17644
Dentifrice, patent....17532
Developer, metol as a....17696
Dextrin paste....17604
Diagrams of electric appar....*17677
Diet, lean meat....17520
Dinosaurs, the....*17828
Disease names, origin of....17605, 17612
Disinfectant for diphtheria....17764
Dogs and cats, trained....*17693
Dogs in war....17810
Draught, helical induced....*17555
Drawbridge, Harlem River....*17626
Dreams, theory of....17909
Dredger, rock....*17629
Dressing for kid shoes....17552
Drummers, foreign, in Germany....17837
Dust, disposal of....17504
Dyes, egg....17734
Dyes, hair, brown....17836
Dynamite, influ. of heat....17906

E

Earth, fuller's....17909
Earth, electric, conductivity....17805
Earth a great magnet....17601
Earthquakes, how to observe....17715
Earthquakes and nerve waves....*17556
Earthquakes, prediction of....17574
Education, overstrain in....17583
Education, technical, Europe.17732, 17748
Egg shells, objects from....*17845
Electric apparat., diagrams....*17677
Electrical notes..17521, 17533, 17553, 17565
17584, 17597, 17621, 17633, 17645, 17665
17686, 17693, 17709, 17733, 17745, 17706
17777, 17789, 17805, 17825, 17837, 17857
17869, 17889, 17901, 17917
Electricity from carbon....17688
Electricity on farms....17625
Electricity by pennsyworth....17533
Electricity vs. shafting....17871
Electricity, stealing of....17533
Electricity, use of in fires....17789
Electrometer, an absolute....17765
Embalming solution....17868
Emulsion for transparencies....17841
Enamel for bicycles....17776
Energy, fuel into electric....17906
Engine, launch....*17865
Engine, pumping, Holst....*17651
Engine, trials of 1896....17569
Engines, gas, progress....17908
Engines, high speed....*17680
Engines, locomotive, old....*17770
*17790, *17806
Engines and pumps, rotary....*17728
*17740, *17760
Engines, pumping, Rotterdam....*17881
Engineering, electric, Germany....17814
Engineering notes....17521, 17533, 17553
17565, 17584, 17597, 17621, 17633, 17645
17665, 17686, 17692, 17709, 17733, 17745
17765, 17777, 17789, 17805, 17825, 17837
17857, 17869, 17889, 17901, 17917
Engraving, photo, acid resist....17856
Equatorials, Vatican and Paris....*17806
Era, brilliant, dawn of....*17576
Etna observatory....*17547
Eucalyptus, calophylla....*17522
Evaporator, film, Foster's....*17906
Exercise, therapeutics of....17556
Exhibit, machinery, Lima....17837
Exhibition, Sweden's....17573
Explosive, a new....17553, 17725
Exposition, Paris, 1900....17848
Eyesight of children....17537

F

Fabrics, prehistoric....*17762
Face bleach....17564
Famine, the Indian....*17583, *17656
*17736
Famines, India, forecasting....17522
Fat Men's Club, Paris....*17833
Ferro-nickel....17597
Fever, typhoid, deaths from....17565
Field glass, improved....*17713
Field glass, stereoscopic....*17888
Film evaporator, Foster's....*17906
Finger prints identification....*17859
Fingers and toes of criminals....17665
Fire extinguisher, liquid....17664
Fire extinguishers, chemical....17857
Fire service, drawing water....17709
Fish, electric, African....17649
Fishes, color of, changes in....17714
Fixing bath, photo....17788
Flags, signaling by....17621
Flame, Bunsen, temperature....17633
Flame, influ. of magnet field....17745
Flashlight powder....17896
Fleets, Greek and Turkish....*17864
Fleets of nations....17554
Floor scrubbing machine....17682
Floors, engine room....17621
Floors, oil for....17693
Flooring, concrete and wire....17738
Flooring, novel....17733, 17857
Florida water....17708
Flour milling, improvements....*17795
Flowers, cut, nux for....17804
Flying machine, Pennington....*17740
Foreigners in France....17743
Formaldehyde, disinfectant....17764
Formulæ, selected, 17520, 17532, 17552
17564, 17584, 17606, 17622, 17632, 17644
17664, 17685, 17692, 17708, 17734, 17744
17706, 17776, 17788, 17797, 17804, 17824
17836, 17856, 17868, 17888, 17900, 17916
Fountain, Hamburg....*17913
Friction, fluid....17565
Fritillaria, an American....*17834
Frost as a fertilizer....*17673
Fruit ice, Japanese....17564
Fruit, ripening, arrest of....17645
Fruits, glace....17745
Fuel energy into electric....17906
Furnace, glass, tank....*17602
Furnaces, electric....*17690
Furnaces, open hearth, charging *17690
Furniture polish....17564

G

Gardens, platform, railway....17709
Gas, automatic lighting of....17657
Gas coals, testing....17677
Gas at a dollar a thousand....17804
Gas engine, new....17553
Gas engines, progress....17903
Gas engines, recent....17681
Gas generator, acetylene....*17652
Gas meter, coin in slot....*17861
Gas, petroleum, electricity....17521
Gas, water, dangerous prop....17777
Gasoline motor, Loyal's....*17794
Gelatine, non-setting....17622
Gem fields of the world....17523
Gems, manufactured....17700
Gems, United States, product....17702
Geological research, progress....17875
Geological Society, America....17544
Germination, electro....*17822, 17834
Girders, fireproof tests....*17534
Glass to drill holes in....17519
Glass, field, stereoscopic....*17868
Glass, floating on water....17677
Glass, ground, to make....17776
Glass for monuments....17805
Glass, substitute for....17837
Glass tank furnace....*17602
Glass, waste, utilization....17733
Glue cement....17693
Glue, chromium....17824
Glue and paste....17797
Glue, tableting....17776
Glue, using, rules for....17686
Gluedin jelly....17644
Glycerine, carbolized....17644
Gold beating....17765
Gold extraction....17633
Gold extraction, chemical....17763
Gold fish, raising....17894
Gold, original deposition....17685
Gold plating....17916
Grinding machinery....*17774
Grotto of Mouthe....*17747
Grottoes of Jonas....*17610
Gulf of St. Lawrence tides....17574
Gun barrels, setting....*17653
Gun, machine, Hotchkiss....*17906
Gun, sectional, new....*17703
Guns, horse power of....17645
Guns, naval, Canet....*17586
Guns, quick fire, mounting....*17554
Guns, wire wound....*17560
Gutta percha, new use for....17837
Gutta percha, use in United States 17841

H

Hack, horseless, the first....*17355
Hair curling powder....17916
Hair, falling, tonic for....17520
Hair lotion....17564
Hair restorer, recipe for....17552
Hair tonic, formula for....17766
Hammers, antiquity of....17857
Handkerchiefs, silk, washing....17664
Harbor at Mazatlan....17692
Hat, high, centennial of....*17851
Hat making in Italy....17809
Heart, pulsations of....17869
Hearth, open, process....17908
Heater, electric....*17778
Heater, feed water, Barker's....*17666
Heating, electric....*17690
Hektograph composition....17744, 17888
Helm indicator....*17570
Helmet, a new....17846
Herbarium, making of a....17755
Horticulture and health....17637
Hospital for plants....17754
Hunchbacks, cure of....*17693
Hussars, Austrian, tournament..*17886

I

Ice, to keep....17706
Inaudi, Jacques....*17787
India, coffee growing in....17894
India, the famine in..*17583, 17656, 17736
India under Victoria....17672
India rubber, hardening....17520
Indicator springs, testing....*17836
Induite powder....17521
Industries, American, future....17780
Industries, electric, of U. S....17585
Ink, black....17888
Ink, blue....17856
Ink, copying....17622
Ink eraser....17706
Ink for glass....17644
Ink for lantern slides....17664
Ink, hektograph....17744
Ink, indelible....17916
Ink, removal from paper....17696
Ink, shoemaker's....17520
Inks for rubber stamps....17584
Inks, sympathetic....17804
Insect bites, lotion for....17532, 17900
Insecticide, plant lice....17706
Insecticides....17888
Instinct, problem of....17724
Institute, Pasteur, Paris....17515
Insurance, labor, Germany....17909
Insurance of infants' lives....17325
Iodoform, odor, removal....17552
Iron and nickel alloys....17581
Iron and steel exports, German....17789
Iron, protect. against rust....17691
Irrigation canal, California....*17543
Irrigation pump, petroleum....*17566
Island, an electric....17777
Island, a strange....17574
Italy, emigration from....17842
Italy, statistics concerning....17764
Ivory sale at Antwerp....*17324

J

Japan, coal mining in....17777
Java, serpents of....17520
Javelle water....17734
Jelly, benzine....17644
Jelly, witch hazel....1764

Jewels of royalty 17778
Jungfrau railway *17781

K

Kangaroos and their young *17746
Kashmir, people and products 17528
Kerry, bog slide of 17683
Knobkerries 17807
Konig, German steamer *17678
Koumyss, formula for 17582
Knowledge, vanishing, saving 17680

L

Labels on cork, paste for 17582
Labor, convict 17621
Laboratory, Davy-Faraday *17577
Lacquers 17632
Lakes, the Laurentian 17776
Lamp, acetylene, new *17795
Lamp filaments, temperature 17571
Lamp, Morison *17652
Lamp oil, bicycle 17552
Lamp, the pea 17602
Lamp, Roentgen, new *17810
Lamps, electric, voltage 17645
Languages by phonograph 17558
Lantern, optical, electric light *17819
Lantern slides, cheap 17581
Last factory, traveling 17786
Latitude, Columbia University 17810
Launch engine *17805
Launch, naphtha *17650
Leather belting, treatment 17633
Leather cement 17552
Leather, degreasing *17842
Leather, renovator for 17788
Leather, russet, polish 17580
Leaves, green, as photo plates 17744
Lemon juice, preserving 17776
Lemons, pickled 17686
Letter boxes, electric 17738
Library, New York 17804
Libraries, traveling, free 17682
Lice, plant, spray for 17888
Life saving apparatus, new *17793
Light, the Durr 17665
Light, electric, for lanterns *17819
Light, magnesium, photo 17824
Lights, arc, power of 17805
Lights, northern, from Brocken *17754
Lighting, electric, on cars 17585
Lighting, electric, cost 17505
Lighting, electric, Paris *17571
Lightning strokes 17581
Lineoleum 17602
Liniment, soap, improved 17529
Liniment, witch hazel 17824
Lip salve 17596
Liquids, hot, to measure 17900
Liquids, surface tension of 17577
Litmus paper, sensitive 17844
Locomotive, American, evolution *17770, *17790, *17806
Locomotive, compound, express *17538
Locomotive, Stephenson's 17577, *17680
Locomotives, American, 1896 17647
Locomotives, Austrian *17738
Locomotives, Japanese *17839
Locomotives, rack *17679
London water supply 17521
Looms in Italy 17584
Lubricant, wire rope 17596
Luciphore, match safe *17881
Lyell, Sir Charles *17876

M

Machines, know your 17629
Magic, Yogi, in India 17845
Magnesium light 17824
Malachite, origin of 17611
Man, primitive, in Egypt 17860
Manganese, ferro, analysis 17744
Mantles, Welsbach 17789
Manure, old and new 17901
Maps, relief *17098
Match distributer *17861
Match factory, an English 17796
Matches, Japanese 17809
Matches, phosphorus 17857
Mausoleum, Schliemann's *17743
Measures, graduated 17564
Meat preserved by electricity 17685
Medals, striking of *17921
Menelik, Emperor *17598
Meridian instrum., Besançon *17897
Metabolism in human body 17823
Metal, expanded *17516
Metal, a rare 17582
Metals, electric conductivity 17645
Metals floating on water 17577
Metals, interdiffusibility 17730
Metals, production of U. S 17892
Metals, relative hardness 17630
Metallurgy, electricity in *17690
Meteorology in schools 17572
Meter, gas, coin in slot *17881
Metric conversion table 17708
Mica refuse for boiler covering 17868
Microphonograph, Dussaud *17861
Milk, bacteriology of 17725
Milk, boric acid in 17321
Milk as a disease carrier 17750
Milk, sterilized, use of 17717
Milling, flour, improvements *17795
Milling machine, test piece *17738
Mills, flour, of U. S 17597
Mills, stamp, for quartz *17902
Mind in animal life 17579
Mind cure, role of mind in 17782
Minors' product of U. S 17892
Minerals, transmutation 17700
Mining and miners 17792
Mining statistics, Swedish 17868
Mint, new, Philadelphia 17810
Mirror, history of the 17781
Mirror writing 17749
Mirrors, dental, clouding of 17697
Miscellaneous notes 17521, 17533, 17553, 17565, 17584, 17597, 17621, 17638, 17645, 17655, 17666, 17682, 17700, 17733, 17745, 17765, 17777, 17789, 17805, 17825, 17837, 17857, 17869, 17889, 17901, 17917
Models of United States *17698
Monasteries, Meteora *17646
Monasteries of middle ages 17558
Monkey, fossil, new *17715
Monkey, morality in the 17843
Mont Blanc Observatory *17886
Monument, Peace *17602
Moon, photography of *17695
Moon, scenery of 17571
Moon, surface of, changes on 17525
Mordants, a few 17666
Moth liquid 17804
Moth powder 17622
Motor car in excelsis 17739
Motor, compressed air *17626
Motor, gasoline, Loyat's *17794
Motor, rotary, Flitz *17775
Motor, rudder, development *17769
Motor, electro, the smallest 17597
Motors, gas and gasoline *17730
Motors, new, for autocars *17588
Motors, single phase 17601
Mount Hamilton, summit of *17546
Mountants, photo 17797
Mustard, prepared 17506

N

Nail polish 17686
Nails, sizes used 17665
Nansen in England *17672
Nansen, expedition of *17784
Naphtha launches *17650
Nature, freaks of *17637
Nature study 17657
Navy, Greek, guns for *17596
Navies of nations 17554
Needles, black polish for 17582
Negatives, blocking out skies 17900
Negatives, retouching *17666
Negatives, weak spots in *17564
Nerve waves *17758
Nerves, role in mind cure 17782
Nesopithecus, the *17715
New York real estate ventures 17536
New York, wealth of 17901
New Zealand railways 17533
Newspaper extra, the 17665
Newspapers of United States 17585
Niagara Falls, water power 17809
Nickel and iron alloys 17581
Nice Observatory *17547
Nickel plating wood 17686

O

Observatory, Mont Blanc *17886
Observatories, mountain *17546
Oil, action on rubber 17734
Oil, castor, tasteless 17856
Oil colors, to remove 17868
Oil for floors 17693
Oil, lamp, bicycle 17552
Oil separator, Barker's *17666
Oil, watchmaker's 17632
Omnibus, motor, Pretot *17710
Opera glass, improved *17713
Opium habit, is it a disease? 17683
Orang-outang, the *17643
Orchid, a beautiful *17755, *17659
Orchid, hybrid *17579
Orchid, a new 17675
Orchid, a showy *17573
Ordnance, iron and steel *17914
Organ, the largest *17785
Organ, a remarkable *17506
Ornithology, economic 17835
Oven, coke, Semet-Solvay *17703
Oxygen generator *17694
Oxygen, liquefying, app *17576

P

Pads, paste for 17582
Paint for metals 17856
Paintings, old, test for 17856
Paolive woods *17530
Palace, silver, for Omaha 17804
Pauillac, pier of *17818
Pantograph, caricature 17613
Paper, asbestos, new 17840
Paper, litmus 17644
Paper, pole 17708
Paper, wall, renewal of 17734
Paper, wrapping, prepared 17694
Papers of world, circulation 17621
Paris, catacombs of *17723
Paris Exposition, 1900 17848
Paris, water consumption 17777
Passengers, transatlantic 17647
Paste, dextrin 17804
Paste, gelatine 17706
Paste, glue 17622
Paste and glue 17797
Paste for labels on cork 17582
Paste for pads 17582
Paste, stereotypers' 17708
Pasteur's Institute, Paris 17515
Pasteur, tomb of 17574
Patents, the Berliner 17652, *17670, 17673
Patents, British 17565
Patents, English, renewal of 17583
Patents issued annually 17505
Patents, proportions issued 17606
Pathology, researches in 17674
Pavement, redwood, failure 17621
Pavement, wooden, the 17602
Pavements, comparative cost 17625
Pavements, wood, Paris 17765
Paving blocks, meadow grass 17521
Paving, wood, hygienic view 17697
Peace monument *17602
Pendulum, ring, gravity 17810
Pens, fountain, age of 17685
Petroleum engine, launch *17665
Petroleum in Galicia 17704
Phaetons, gasoline *17739
Philosophers, bygone *17575
Photochronograph, polarizing *17512
Photographers, hint for 17868
Photographs, star, measuring *17919
Photographs, watch dial 17916
Photography in colors 17810
Photography in colors, bibliography 17883
Photography, kite 17705
Plants, identification of 17701
Plaster of Paris, setting of 17686
Plate shearing machine *17666
Plates, steel, Harveyized 17798
Platinum, Russian output 17709
Playgrounds, municipal 17550
Plow, electric 17565
Plowing, chemistry of 17528
Pier of Pauillac *17818
Pigeon cote registering app *17779
Pile driving through stone 17857
Pile, a teredo proof 17869
Pine stumps, utilizing 17505
Pipe line for fire service 17769
Pipes, paper and cellulose 17533
Po, river, embankments 17566
Poles, magnetic, position 17731
Polish for ax handles 17788
Polish, black, for needles 17552
Polish, metal 17776
Polish, russet leather 17520
Pont transbordeur, Rouen 17825
Population, United States, centers 17584
Powder grains, removal of 17900
Powder, smokeless, new 17521
Power, horse, friction 17654
Power, measurement of 17727
Power transmission, rope 17711
Power, wave, utilization *17712
Press, wheel, hydraulic *17589
Prince George battleship *17560
Prince George of Greece *17719
Printing on marble 17900
Prints, blue, large 17889
Prints, bromide, washing 17900
Projection apparatus, chronophotographic *17527
Pulleys, new arrangement 17645
Pump, irrigation, petroleum *17566
Pumps, air, for steamer *17618
Pumps, centrifugal *17854
Pumps and engines, rotary *17728, *17740, *17760
Pumping engines for Rotterdam *17881
Putty, sculptor's 17766
Pyrocollodion powder 17685

Q

Quarries, stone, Indiana *17639
Quarrying with lime 17565
Quoits, war 17897

R

Rabbit plague, Australia 17869
Race, horseless carriage *17518
Rails, worn, rerolling 17741
Railroad notes 17709
Railroad speeds, American 17668
Railroads, American, lessons 17904
Railroads, street, N. J 17901
Railway, Beyroot & Damascus 17521
Railway, Brighton & Rottingdean 17533
Railway building in Canada 17759
Railway fares, zone system 17809
Railway, Jungfrau *17815
Railway mileage, Russian 17825, 17889
Railway, narrow gage, India 17840
Railway, Pennsyl., track mileage 17665
Railway postal cars 17679
Railway routes, African 17669
Railway, single rail *17726
Railway speed 17745
Railway stations, English 17684
Railways of Australia 17665
Railways of Ceylon 17845
Railways, compressed air on 17533
Railways of Denmark 17533
Railways in Greece 17840
Railways, narrow gage, German 17789
Railways of New Zealand 17533
Railways, street, American 17648
Railways, street, United States 17733
Railways of the world 17616, 17889
Railway track, American, length 17777
Railway, Transsiberian *17707
Railway, Transsiberian extens 17867
Railway, Transsiberian, traffic 17866
Rays, Becquerel 17542
Rays, the X 17004
Rays, X, in anatomical study 17889
Rays, X, in coal analysis 17709
Rays, X, experiments with 17843
Rays, X, in treating disease 17777
Refractor, Lick, eyepiece of *17895
Regulator, thermal *17816
Reliefs, colloid 17855
Remains, aboriginal, Nevada *17751
Reptiles of the desert 17858
Research, geological, progress *17875
Research, pathological, value 17875
Respiration, work on 17636
Retouching medium 17896
Ride on a moving roller *17531
Ride, a remarkable 17538
Rinderpest, report on 17764
Rock dredging on Rhine *17628
Rope driving 17711
Rope, manila *17614
Rubber, action of oil on 17734
Rubber, application of 17597
Rubber, artificial 17776
Rubbish disposal, Budapest 17785
Rue Beaumur, Paris *17758
Ruins, aboriginal, Nevada *17751
Ruins, Casa Grande *17877
Rust on iron structures 17869

S

Sag of metals 17825
Saghalien Island 17574
Salts, fluorescing 17921
Salve, lip 17596
Sand, detect. of salt in 17765
Schliemann, mausoleum of *17743
Science, psychical, Crookes on 17842
Screens, cryptoscope 17560
Screens for isochromatic work 17868
Screws, triple, efficiency of 17587
Seeds, fruit, economic use 17814
Seesaw, a giant 17825
Seidlitz powders, limonated 17664
Seriland, exploration of 17549
Serpents of France *17607
Serpents of Java 17550
Sewage disposal, farm 179 1
Shampoo, dry 17686
Shampoo paste 17916
Shavings, disposal of *17855
Shearing machine, plate *17656
Ship, capsizing of *17769
Ship, sailing, Potosi *17587
Ships Alabama and Pr. George *17802
Ships, stability of *17802
Ships with gas engines 17745
Shipbuilding of 1896 17633
Shoe sole preservative 17734
Shot, lead, manufacture 17633
Shovel, coal, steam *17688
Siberia, as grain exporter 17861
Siccatives, soluble 17741
Sidewalks, mosaic, Prague 17869
Signaling, army 17884
Silk, artificial 17553
Silver, cost of production 17553
Silver palace for Omaha 17804
Siphon recorder, improved *17537
Slag as a fertilizer 17659
Slate, largest piece known 17889
Sleigh, bicycle *17682
Slides, astronomical 17581
Sloth, the *17736
Snakes of France *17607
Soap, erasive 17836
Soap in lubricating oil, test 17766
Soap for metals 17868
Soap powders 17584
Soil for greenhouses 17564
Solder, copper colored 17900
Sole preservative 17734
Sound, perception of 17781
Speaking tube for steamers 17857
Spirits, use of, increasing 17825
Springs, indicator, testing *17838
Springs, mineral, of United States 17674
Stamp mills, quartz *17902
Stamp stems, lubricant 17520
Stamps, rubber, making *17743
Statistics, vital, for 1896 17621
Steam and gas power, cost of 17621
Steam for heating 17919
Steam lagging, tests of 17585
Steam, physical properties 17592
Steam trap, Midget *17775
Steamer Konig, German *17678
Steamships, food supply of 17718
Steel, armor, new 17521
Steel drilling 17637
Steel, hardness of 17889
Steel, open hearth, Bertrand 17908
Steel, prevent. of splashing 17772
Steel, tempering 17585
Steel, tenacity of 17685
Stevens Institute 17669
Stomatal, dentifrice 17532
Stone carving, durability 17912
Stones, precious, and geography 17832
Stove, evolution of 17554
Stove polish, paste 17622
Stratena 17644
Street traction in France 17598
Streets paved with diamonds 17606
Strikes of 1895 17645
Sun, temperature of 17659
Sweden, exhibition in 17573
Switches, lamp, electric 17901
Synchronograph, the *17811, *17820

T

Table, reading, ancient *17731
Tanks, wood pulp 17597
Tarsiids, position of 17810
Tectorium 17837
Telegraph, steering *17570
Telegraphy, submarine *17537, 17779
Telegraphy, submarine, future 17837
Telegraphy, submarine, war *17880
Telemeter, stadia *17713
Telepathy *17556
Telephone, anecdote of 17901
Telephone in Austria 17869
Telephone, patent, Berliner 17852, *17870, 17873
Telephone talk as evidence 17889
Telephoning in diving 17805
Telescope, long distance, naval 17805
Temperature at great heights 17750
Temperature of rooms, modific 17824
Temperatures, high, identif 17702
Test piece machine *17738
Tetanus antitoxin 17642
Tetra-nitro-cellulose 17725
Textile art, prehistoric *17762
Theaters, Roman 17776
Thorium 17582
Tigers, young, playfulness *17722
Timber slide, longest 17745
Tinder box industry 17629
Tin plate industry 17529
Tobacco, toxic effects 17668
Toning bath, photo 17736
Tooth paste, strontium 17529
Tooth wash 17564
Tornadoes, varying power 17754
Torpedo boat destroyers, new *17595
Torpedo boat Turbinia *17920
Tower, the Chicago 17533
Tower of Silence, Parsee *17659
Track laying, former cost 17709
Tracks, elevated, of N. Y. C. R. R. 17624
Traction, compressed air for 17592
Traction, electric, sewer 17668
Traction, street, in France 17581, 17678
Train, mishap to 17677
Train, railway, speed 17745
Trains, fast, German 17565
Training, brain, new method 17517
Tramway, electric, Lausanne 17558
Tramways, electric, statistics 17521
Tramways, Rouen 17665
Transjapan canal 17817
Transmitter patent, Berliner 17852 *17870, 17873
Transparencies, emulsion for 17841
Transportation, railway, cheap 17904
Treasure trove, medical 17644
Tree, a fireproof 17781
Tricycle, gasoline *17567
Tunnel for Broadway *17772
Tunnel, Irish Channel 17901
Tunnel, Italy and Sicily 17592
Tunnel, Simplon 17777
Tunnel under the Spree *17548
Turbine, wind for orchestrions *17586
Turntable, the largest 17814
Turrets for Romer shoals 17645
Typewriter speed 17629

U

Uranium, preparation of 17532
Uranyl, fluoride of 17569

V

Vaccination, century of 17542
Vacuum, absolute, production 17765
Vacuum, utility of 17532
Vanadium, uses of 17569
Varnish, black 17506
Varnish for copper 17632
Varnish, label 17644
Varnish for metals 17632
Varnish, patent leather 17868
Varnish, to remove 17868
Varnish for steel 17632
Vaults and pipes, fiber 17533
Vegetation, action of gas on 17620
Vegetation, experiment on 17573
Velestino, battle of *17880
Velvet, patterns in 17597
Ventilation, new system 17553
Venus de Milo, the *17634
Vertebrates, origin 17640, 17660
Vessel, old, model of *17817
Vessel, sailing, the largest *17567
Vessels launched in 1896 17665
Vessels, navy, German, new *17742
Viaduct, Coldrenick, disaster *17706
Vineyards of France 16846
Virgil, mosaic portrait of *17860

W

Wall paper preservative 17734
Wanderer, celestial, story of 17724
War, Greco-Turkish *17800
War in Thessaly *17682, *17864
Wash blue in cakes 17520
Wash blue tablets 17622
Washing powder 17584
Wasp sting remedy 17644
Watch, a costly 17521
Water of condensation app *17865
Water, condensation, cooling *17902
Water, corrosive power 17621
Watt and measurement of power 17727
Wave power, utilization *17712
Waves, electric, velocity 17777
Wax wire for cores 17585
Weapons, curious 17897
Welding, electric 17600
Whale fishing *17752
Wheel, car, tests of 17789
Wheels, fly, bursting of 17889
Wheelman and pedestrian, work *17530
William the Great, celebration *17767
Wine, unfermented 17664
Wiring, electric, faults in 17537
Wire, gilding 17744
Witch hazel cream 17804
Witch hazel jelly 17644
Witch hazel liniment 17824
Woman, intellect of *17611
Woman measured by man 17658
Woman, a remarkably strong *17582
Wood, nickel plating 17686
Wood protector, adamantine 17606
Wood working, built up 17857
World, around, in 38 days 17621
Worms, green fruit *17808

Y

Yakima county, irrigation of *17543

Z

Zebras, a team of *17550
Zimbabye, ruins of *17700
Zinc, aluminized 17913
Zinc, prod. in blast furnace 17597
Zone system of railway fares 17809
Zulus, social customs of 17716
Zuyder Zee, drainage of 17567